

PRE-APPEAL BRIEF REQUEST FOR REVIEW

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In re Application of: **WILLIAMS, JR ET AL**
Application Number: **10/811,044**
Confirmation Number: **9536**
Filing Date: **May 27, 2004**
For.: **Bypassing Native Storage Operations By Communicating
Protected Data Within Locking Messages Using a Lock
Manager Independent of the Storage Mechanism**
Art Unit: **2165**
Examiner Name: **HICKS, Michael J.**
Attorney Docket No.: **42027**

**Applicant requests review of the final rejection in the above-identified application.
No amendments are being filed with this request.**

This request is being filed with a notice of appeal.

The review is request for the reasons stated on the attached FIVE (5) sheets.

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Signature	
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Date	May 18, 2009
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Appellants respectfully submit that the claims are allowable and the prior Office actions are deficient at least the reasons presented herein, as well as in Amendment C filed November 8, 2008.

1. Clear Error In Fact In All Of The Office's Claim Rejections, And The Office Clearly Fails To Establish A Prima Facie Case Of Anticipation As The Prior Art Of Record Fails To Teach Each And Every Claim Limitation Of Any Of The Claims

Appellants respectfully submit that this is a very simple and clear case of clear error in fact in the rejections of each and every claim as the prior art of record fails to teach the limitation of transferring protected data via a lock manager. Note, all claims stand as anticipated under 35 USC § 102(b) by Trancoso et al. (in contrast to being rejected as being obvious under 35 USC § 103). The MPEP and law is clear that for anticipation, the reference *must teach each and every aspect of the claimed invention* either explicitly or impliedly, and the burden is on the Office to present a *prima facie* case of anticipation. MPEP § 706.02. Inherent means it must occur. The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. MPEP § 2112 (*emphasis in original*).

Trancoso et al. fails to teach that the protected data is passed through the lock manager. Trancoso et al. does teach that: "[w]e note in passing that this queue can be used to forward the lock variable itself." Trancoso et al. at page III-80, second column, first full paragraph. It is well-known that a lock variable is not the data protected by the lock; rather the holder of the lock variable is the one that can access the lock's protected data. So, Trancoso et al. do not teach that the protected data is passed through the lock manager, but just that the lock variable can be passed through its queue of the list of processors waiting for the lock (i.e., so that the acquiring processor becomes the holder of the lock variable).

The Office extrapolates from this statement in Trancoso et al., and rejects all claims for the reason "[n]ote that the fact that the lock manager may be used to forward lock variables indicates that the processors may pass data too (*sic*) the lock manager." Final Office action, mailed February 3, 2009, page 6. Appellants respectfully submit that there is an alternative (and in fact is what Trancoso et al. teaches) is that the protected data is not passed through this queue, rather it is directly passed from the releasing processor to the acquiring processor, or read from native storage by the acquiring processor.

Again, all claims are rejected as being anticipated by Trancoso et al. Therefore, the rejection in the Office action is not a proper anticipatory rejection, as Trancoso et al. fails to teach this discussed limitation, directly or inherently; and to be inherently taught, it means it must occur, not may occur. Appellants have shown that there is a viable alternative (which is what is actually done) to the interpretation given to Trancoso et al. by the Office; and therefore, passing of the protected data through the queue is not inherent in the teachings of Trancoso et al. For at least these reasons, the Office action fails to present a *prima facie* rejection of any claim, as all claims require the discussed limitation, and the Office action fails to provide a teaching for this limitation that is actually taught by the prior art.

Although this is sufficient to overcome the outstanding rejections of every claim based on prior art, Appellants will briefly discuss a reason why the claims are not rendered obvious by Trancoso et al. The primary purpose of Trancoso et al. is to speed up the processing of critical sections by data prefetching and forwarding. Trancoso et al., Abstract. Prefetching means that a processor loads the cache ahead of the time of its use. Trancoso et al., page III-79, column 2, second full paragraph. Forwarding involves sending the data to the cache of the future consumer [the acquiring processor] so that the time the consumer needs the data it can access it locally from its cache. *Id.* Prefetching means reading the information from its native storage if it is not already in the cache of the processor. So, this is not really relevant to the claim limitation at issue.

Trancoso et al. teaches that a releasing processor forwards the protected data directly to the acquiring processor. This allows the desired speedup because it avoids a write to memory by the releasing process and then a read from memory by the acquiring process. The Office action states that the queue listing the processors waiting for the lock/lock variable can be used to pass the protected data. Final Office action at page 6. However, this Office's modification of Trancoso et al. adds a write to memory (the queue) and a read from the memory (the queue); thus, adding delay by one write/read set of operations. This is the same as writing the protected data back to native storage. For at least this reason, one would not modify Trancoso et al. as stated by the Office as it defeats its intended primary purpose of speeding up the critical sections avoiding one write/read set of operations.

Finally, the Office has provided no teaching in prior art where it is known to use a lock manager to transfer the data being protected by the lock manager; and especially not as recited in any pending claim. For at least these reasons, Appellants respectfully submit that the prior art of record neither teaches nor suggests all claim limitations of any pending claim.

II. Clear Error In Fact As All Claims Recite Patentable Subject Matter As The Office's Claim Constructions Of Claims 10-11 And 22-26 Are Unreasonable And Contradicts The Federal Circuit's Example Of A Proper Claim Construction Of Apparatus Means-Plus-Function Claims In State Street Bank & Trust Co. v. Signature Financial Group Inc., 47 USPQ2d 1596 (Fed. Cir. 1998).

In regards to the § 101 rejections of claims 10-11 and 22-26, Appellants respectfully traverse these rejections as the Office's position directly conflicts the holding in with the Federal Circuit in *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 47 USPQ2d 1596, 1599 (Fed. Cir. 1998) ("*State Street Bank*"). In *State Street Bank*, the Federal Circuit construed the limitations of the claim at issue to be apparatus claims (i.e., "second means" was properly construed to be "an arithmetic logic circuit configured to retrieve information from a specific file...", and not "software for retrieving information from a specific file..."). *Id.*

Appellants further traverse the Office's characterization (on page 2 of the Office action) of what Appellants admits, as Appellants make no such admission. The Office states that these claims "may reasonably construed as 'media containing computer-executable instructions for performing xxx'." *Id.* Appellants apologize if the statements Amendment C were not clear, and will attempt to clarify herein. Appellants position is that proper claim construction of a limitation in the form of "means for performing a particular operation" must in fact be able to perform the particular operation. Hence, a proper construction of a claim with such construction including 'a media containing computer-executable instructions for performing xxx' would require hardware (e.g., one or more processors, etc.) to execute these instructions. *See, State Street Bank* at 1599 (claim construction of the means plus function limitations include hardware to perform the recited

function). One skilled in the art understands that is impossible for the Office's construction of these claims (e.g., as merely computer-readable media, or as purely software) to perform the recited means function limitations. Mere media containing instructions cannot perform the functionality of the instructions. Purely software cannot perform any function. One skilled in the art understands these fundamental principles, which is reflected in the claim construction in *State Street Bank*. Rather, as understood by one skilled by the art and reflected in the Federal Circuit's *State Street Bank* opinion, it is hardware responsive to software or computer-executable instructions stored in a computer-readable media that performs operations (not the software nor stored-instructions). Note, the word 'impossible' when describing a claim construction (as in such construction is impossible to perform the recited limitation) is a very good indicator that such claim construction is unreasonable.

Additionally, Appellants disclosure does not teach the Office's claim construction, but rather, that Appellants disclosure states "'means for xxx' typically includes computer-readable media containing computer-executable instructions for performing xxx." Original disclosure, page 10. This statement is accurate, and note the phrase "typical includes" (e.g., most-often contains - with "includes" being opened ended, i.e., contrasted with the phrase "consists of"). Applicants further note that FIG. 5B of the original disclosure illustrates "a system or component used in one embodiment for implementing a lock manager and/or one or more requesters. In one embodiment, system or component 540 performs one or more processes corresponding to one of the flow diagrams illustrated or otherwise described herein." Original disclosure, page 19. System or component 540 includes a processing element 541, as well as computer-readable media 542, 543 which containing computer-executable instructions that are executed by processor 541 to perform functions in one embodiment. *Id.* at pp. 19-20 ("Memory 542 typically stores computer-executable instructions to be executed by processing element 541 and/or data which is manipulated by processing element 541 for implementing functionality in accordance with an embodiment... Storage devices 543 typically store computer-executable instructions to be executed by processing element 541 and/or data which is manipulated by processing element 541 for implementing functionality in accordance with an embodiment.") Therefore, computer-readable media containing

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computer-executable instructions may, and typically will, be a part of an embodiment (e.g., hardware/processor(s) responsive to computer-executable instructions).

Principles of basic Computer Science include that merely instructions stored on media nor mere software are able to perform functions; rather, it is hardware that performs the functions, including hardware responsive to such instructions / software. Independent claim 10 includes the limitation of "means for copying said protected data from the release into a grant message and for sending the grant message to the next requester." Independent claim 22 includes the limitation of "means for sending a first grant message to the first requester, the first grant message not including said protected data, and in response to identifying one or more requesters is waiting for the lock after the first requester, including an indication to return said protected data in the first grant message." Applicants respectfully submit that proper claim construction of these limitations require some hardware to actually perform the recited functionality. For at least these reasons, proper claim construction, consistent with Appellants disclosure, *State Street Bank*, and basic Computer Science principles dictates that each of apparatus claims 10-11 and 22-26 fall within the machine statutory class of 35 USC § 101. For at least these reasons, Appellants respectfully request the § 101 rejections of all claims be withdrawn.

Moreover, should the Office persist in its § 101 rejections, Appellants request the Office explain how media containing instructions or software (i.e., the Office's claim construction of pure software on page 5 and computer-readable media containing computer-executable instructions on pages 2-3 of the Office action) can actually perform the recited functions of the means-plus-functions limitations of these claims. Appellants believe that this is physically impossible, and one skilled in the art understands this fundamental principle that hardware is required to perform the functionality. Again, this hardware may be responsive to the instructions/software, but it is ultimately the hardware that performs the recited functions. The Federal Circuit's construction of the means-plus-function claims is consistent with Appellants' position, and Appellants request the Office follow this controlling precedent.